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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,404	03/01/2004	Preston A. Henne	03130.0004.CPUS02	2403

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EXAMINER

SWIATEK, ROBERT P

ART UNIT PAPER NUMBER

3643

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,404

Applicant(s)

HENNE ET AL.

Examiner

Robert P. Swiatek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 32, 33, 35, 36, 39 of U.S. Patent No. 6,698,684 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the above patent claims a method of reducing the effects of a sonic boom including the steps of providing an aerospace vehicle with a first, leading end spike and a second, rearward spike, the first spike extending from the nose thereof and having a leading end portion tapering toward both a point and a predetermined cross-section, a first section, and a first transition region between the predetermined cross-section and the first section.

Claim 6 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 32, 39 of U.S. Patent No. 6,698,684 B1 in view of Killian (US 3,412,962). It would have been obvious to one skilled in the art to provide the claimed second, rearward spike of Patent No. 6,698,684 with a tapered construction, including an

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intermediate first transition region, in view of the patent to Killian that such a construction serves to streamline an aircraft during high speed flight, reducing drag (see element 20 of Killian).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Silva (US 3,425,650). Nose spike B, D of Silva includes a leading end portion D tapering to a forward point; a first section 10c; and a first transition section 10d between the portion D and the first section 10c.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silva in view of Killian. While the Silva aircraft lacks a rear, second spike (note Figure 1 of Silva), it would have been obvious to provide it with a rear spike, in view of the patent to Killian that a rear spike reduces air drag by streamlining the blunt end of an aircraft (see Figures 1, 2 and element 20 of Killian).

Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Killian. The distal, trailing portion of the Killian spike 20 tapers to a predetermined cross-section 28; the spike

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further includes a first section 24 and a first transition region 26 between the first section and the predetermined cross-section 28.

Claim 6 is objected to because of the following informalities: In line 7, "leading" is misleading and should be changed to ~~-trailing-~~ or ~~-distal-~~. Appropriate correction is required.

The abstract of the disclosure is objected to because use of the term "said" in line 2 should be avoided. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: In paragraph 0001, the present status of each of the two listed U.S. applications should be indicated.

Appropriate correction is required.

The patents to Besson (US 2,960,293) and Porter et al. (US 5,275,360) have been cited to provide additional examples of aircraft leading end spike structures.

RPS: 571/272-6894

14 September 2005

*Robert P. Swiatek*

ROBERT P. SWIATEK  
PRIMARY EXAMINER  
ART UNIT 32 3643